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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
SZNAIDMAN, MARCOS L				
ART UNIT		PAPER NUMBER		
1611				
NOTIFICATION DATE		DELIVERY MODE		
03/21/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

## Application No.

10/533,224

## Applicant(s)

NISHIDE ET AL.

## Examiner

MARCOS SZNAIDMAN

## Art Unit

1611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/02)  
Paper No(s)/Mail Date 10 pages / 07/27/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This office action is in response to applicant's filing of April, 29, 2005.

### ***Status of Claims***

Claims 1-3 are currently pending and are the subject of this office action.

Claims 1-3 are presently under examination.

### ***Priority***

The present application is a 371 of PCT/JP03/13785 filed on 10/28/2003, and claims priority to foreign application: JAPAN 2002-317759 filed on 10/31/2002.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 rejected under 35 U.S.C. 102(b) as being anticipated by Nishide et. al. (WO 2002/02527, cited by applicant).

Claim 1 recites a fungicide containing at least one 3-benzoyl-2,4,5-substituted pyridine derivatives selected from the group consisting of a long list of compounds (see claim 1), one of which is:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-methoxy-4-methylpyridine (see claim 1, page 47, lines 25-26), and the other one is:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-4-trifluoromethyl-2-methoxy-5-methylpyridine (see claim 1, page 48, lines 1 and 2).

For claim 1, Nishide et. al. teach the following compounds:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-methoxy-4-methylpyridine (compound # 158, see page 63, Table 12), and

3-(2,3,4-trimethoxy-6-methylbenzoyl)-4-trifluoromethyl-2-methoxy-5-methylpyridine (compound # 49, see page 58, Table 3).

Claim 3 recites at least one phenylpyridylmethanol derivative selected from the group consisting of a long list of compounds (see claim 3), one of which is:

(2,3,4-trimethoxy-6-methylphenyl) (5-chloro-2-methoxy-4-methyl-3-pyridyl)methanol (see claim 3, page 52, lines 3-5), and the other one is:

(2,3,4-trimethoxy-6-methylphenyl)(4-trifluoromethyl-2-methoxy-5-methyl-3-pyridyl)methanol (see claim 3, page 53, lines 6-8).

For claim 3, Nishide et. al. teach compounds:

(2,3,4-trimethoxy-6-methylphenyl) (5-chloro-2-methoxy-4-methyl-3-pyridyl)methanol (compound # 158, see page 79, Table 30), and

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(2,3,4-trimethoxy-6-methylphenyl) (4-trifluoromethyl-2-methoxy-5-methyl-3-pyridyl)methanol (compound # 49, page 74, Table 21).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishide et. al. (WO 2002/02527, cited by applicant).

Claim 1 recites a fungicide containing at least one 3-benzoyl-2,4,5-substituted pyridine derivatives selected from the group consisting of a long list of compounds (see claim 1), some examples are:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-4-ethyl-2-methoxypyridine (see claim 1, page 46, lines 6-7), from now on compound A

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-ethoxy-4-methylpyridine (see claim 1, page 46, lines 11-12), from now on compound B, and

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-bromo-4-trifluoromethyl-2-methoxypyridine (see claim 1, page 46, lines 22-23), from now on compound C.

Nishide et. al. do not teach any of the three above mentioned compound.

However they teach the following compounds:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-methoxy-4-methylpyridine (compound # 158, see page 63, Table 12), from now on compound X, and

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-4-trifluoromethyl-2-methoxypyridine (compound # 56, see page 58, Table 3), from now on, compound Y.

Compound A of the instant application and compound X of the prior art, differ only in that compound A has an ethyl group in position 4, while compound X has a methyl in position 4. In other words: these two compounds are identical, except for the

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presence of an ethyl group in compound A, instead of a methyl in compound X. MPEP 2144.09 section II, says that homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by  $-CH_2-$  groups) are generally of sufficient close structural similarity that there is presumed expectation that such compounds possess similar properties. MPEP 2144, Section III states: prior art structures do not have to be true homologs or isomers to render structurally similar compounds *prima facie* obvious. *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979) (Claimed and prior art compounds were both directed to heterocyclic carbamoyloximino compounds having pesticidal activity. The only structural difference between the claimed and prior art was that the ring structures of the claimed compounds had two carbon atoms between two sulfur atoms, whereas the prior art ring structures had either one or three carbon atoms between two sulfur atoms. The court held that although the prior art compounds were not true homologs or isomers of the claimed compounds, the similarity between the chemical structures and properties is sufficiently close that one of ordinary skill in the art would have been motivated to make the claimed compounds in searching for new pesticides). *In re Gyurik*, 201 USPQ 552, 596 F.2d 1012 on page 557 states: "In obviousness rejections based on close similarity in chemical structure, the necessary motivation to make a claimed compound, and thus the *prima facie* case of obviousness, rises from the expectation that compounds similar in structure will have similar properties." In this case, it is expected that compounds A and X, differing by only one  $-CH_2-$  group, would have similar chemical, physical and biochemical properties.

Compound B of the instant application and compound X of the prior art, differ only in that compound B has an ethoxy group in position 2, while compound X has a methoxy group in position 2. In other words: these two compounds are identical, except for the presence of an ethoxy group in compound A, instead of a methoxy group in compound X. Since these two compounds only differ by only one  $-CH_2-$  group, the same reasoning as shown between A and X (see above), is applied to this case.

Compound C of the instant application, and compound Y of the prior art, differ only in that compound C has a bromine in position 5, while compound Y has a chlorine in position 5. Using the same argument regarding homolog compounds (see above), it is expected that compounds C and Y, differing only in the type of halogen, would have similar chemical, physical and biochemical properties.

At the time of the invention, it would have been *prima facie* obvious for a person of ordinary skill in the art to replace a methyl group of the compound described in the prior art with an ethyl group, or a methoxy with an ethoxy, or a chlorine with a bromine, with the motivation of obtaining compounds with similar chemical, physical and biological properties, thus resulting in the practice of claim 1, with a reasonable expectation of success.

Claim 2 recites at least one 3-benzoyl-2,4,5-substituted pyridine derivative selected from the group consisting of a long list of compounds (see claim 2), some examples are:



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3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-4-ethyl-2-methoxypyridine (see claim 2, page 48, lines 8-9), from now on compound A

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-ethoxy-4-methylpyridine (see claim 2, page 48, lines 13-14), from now on compound B, and

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-bromo-4-trifluoromethyl-2-methoxypyridine (see claim 2, page 48, lines 24-25), from now on compound C.

Nishide et. al. do not teach any of the three above mentioned compound.

However they teach the following compounds:

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-2-methoxy-4-methylpyridine (compound # 158, see page 63, Table 12), from now on compound X, and

3-(2,3,4-trimethoxy-6-methylbenzoyl)-5-chloro-4-trifluoromethyl-2-methoxypyridine (compound # 56, see page 58, Table 3), from now on, compound Y.

Compound A of the instant application and compound X of the prior art, differ only in that compound A has an ethyl group in position 4, while compound X has a methyl in position 4. In other words: these two compounds are identical, except for the presence of an ethyl group in compound A, instead of a methyl in compound X. MPEP 2144.09 section II, says that homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by  $-CH_2-$  groups) are generally of sufficient close structural similarity that there is presumed expectation that such compounds possess similar properties. MPEP 2144, Section III states: prior art structures do not have to be true homologs or isomers to render structurally similar compounds *prima facie* obvious. *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979) (Claimed and prior

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art compounds were both directed to heterocyclic carbamoyloximino compounds having pesticidal activity. The only structural difference between the claimed and prior art was that the ring structures of the claimed compounds had two carbon atoms between two sulfur atoms, whereas the prior art ring structures had either one or three carbon atoms between two sulfur atoms. The court held that although the prior art compounds were not true homologs or isomers of the claimed compounds, the similarity between the chemical structures and properties is sufficiently close that one of ordinary skill in the art would have been motivated to make the claimed compounds in searching for new pesticides). In *re Gyurik*, 201 USPQ 552, 596 F2d 1012 on page 557 states: "In obviousness rejections based on close similarity in chemical structure, the necessary motivation to make a claimed compound, and thus the *prima facie* case of obviousness, rises from the expectation that compounds similar in structure will have similar properties." In this case, it is expected that compounds A and X, differing by only one -CH<sub>2</sub>- group, would have similar chemical, physical and biochemical properties.

Compound B of the instant application and compound X of the prior art, differ only in that compound B has an ethoxy group in position 2, while compound X has a methoxy group in position 2. In other words: these two compounds are identical, except for the presence of an ethoxy group in compound A, instead of a methoxy group in compound X. Since these two compounds only differ by only one -CH<sub>2</sub>- group, the same reasoning as shown between A and X (see above), is applied to this case.

Compound C of the instant application, and compound Y of the prior art, differ only in that compound C has a bromine in position 5, while compound Y has a chlorine

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in position 5. Using the same argument regarding homolog compounds (see above), it is expected that compounds C and Y, differing only in the type of halogen, would have similar chemical, physical and biochemical properties.

At the time of the invention, it would have been *prima facie* obvious for a person of ordinary skill in the art to replace a methyl group of the compound described in the prior art with an ethyl group, or a methoxy with an ethoxy, or a chlorine with a bromine, with the motivation of obtaining compounds with similar chemical, physical and biological properties, thus resulting in the practice of claim 2, with a reasonable expectation of success.

Claim 3 recites a fungicide containing at least one phenylpyridylmethanol derivative selected from the group consisting of a long list of compounds (see claim 3), some examples are:

(2,3,4-trimethoxy-6-methylphenyl) (5-chloro-4-ethyl-2-methoxy-3-pyridyl)methanol (see claim 3, page 50, lines 5-6), from now on compound A

(2,3,4-trimethoxy-6-methylphenyl) (5-chloro-2-ethoxy-4-methyl-3-pyridyl)methanol (see claim 3, page 50, lines 11-13), from now on compound B, and

(2,3,4-trimethoxy-6-methylphenyl) (5-bromo-4-trifluoromethyl-2-methoxy-3-pyridyl)methanol (see claim 3, page 50, lines 24-25), from now on compound C.

Nishide et. al. do not teach any of the three above mentioned compound. However they teach the following compounds:

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(2,3,4-trimethoxy-6-methylphenyl) (5-chloro-2-methoxy-4-methyl-3-pyridyl)methanol (compound # 158, see page 79, Table 30), from now on compound X, and (2,3,4-trimethoxy-6-methylphenyl) (5-chloro-4-trifluoromethyl-2-methoxy-3-pyridyl)methanol (compound # 56, see page 74, Table 21), from now on, compound Y.

Compound A of the instant application and compound X of the prior art, differ only in that compound A has an ethyl group in position 4, while compound X has a methyl in position 4. In other words: these two compounds are identical, except for the presence of an ethyl group in compound A, instead of a methyl in compound X. MPEP 2144.09 section II, says that homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by  $-CH_2-$  groups) are generally of sufficient close structural similarity that there is presumed expectation that such compounds possess similar properties. MPEP 2144, Section III states: prior art structures do not have to be true homologs or isomers to render structurally similar compounds *prima facie* obvious. *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979) (Claimed and prior art compounds were both directed to heterocyclic carbamoyloximino compounds having pesticidal activity. The only structural difference between the claimed and prior art was that the ring structures of the claimed compounds had two carbon atoms between two sulfur atoms, whereas the prior art ring structures had either one or three carbon atoms between two sulfur atoms. The court held that although the prior art compounds were not true homologs or isomers of the claimed compounds, the similarity between the chemical structures and properties is sufficiently close that one of ordinary skill in the art would have been motivated to make the claimed compounds in searching for new

pesticides). In *re Gyurik*, 201 USPQ 552, 596 F2d 1012 on page 557 states: "In obviousness rejections based on close similarity in chemical structure, the necessary motivation to make a claimed compound, and thus the *prima facie* case of obviousness, rises from the expectation that compounds similar in structure will have similar properties." In this case, is expected that compounds A and X, differing by only one -CH<sub>2</sub>- group, would have similar chemical, physical and biochemical properties.

Compound B of the instant application and compound X of the prior art, differ only in that compound B has an ethoxy group in position 2, while compound X has a methoxy group in position 2. In other words: these two compounds are identical, except for the presence of an ethoxy group in compound A, instead of a methoxy group in compound X. Since these two compounds only differ by only one -CH<sub>2</sub>- group, the same reasoning as shown between A and X (see above), is applied to this case.

Compound C of the instant application, and compound Y of the prior art, differ only in that compound C has a bromine in position 5, while compound Y has a chlorine in position 5. Using the same argument regarding homolog compounds (see above), it is expected that compounds C and Y, differing only in the type of halogen, would have similar chemical, physical and biochemical properties.

At the time of the invention, it would have been *prima facie* obvious for a person of ordinary skill in the art to replace a methyl group of the compound described in the prior art with an ethyl group, or a methoxy with an ethoxy, or a chlorine with a bromine, with the motivation of obtaining compounds with similar chemical, physical and

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biological properties, thus resulting in the practice of claim 3, with a reasonable expectation of success.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 11/414,401. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application recites a composition comprising the same benzoyl pyridines claimed in the instant application (see for example claim 7 of the copending application that recites the exact same compounds as claim 1 and 2 of the instant application).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCOS SZNAIDMAN whose telephone number is (571)270-3498. The examiner can normally be reached on Monday through Thursday 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward can be reached on 571 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MLS  
March 05, 2008

/Michael P Woodward/  
Supervisory Patent Examiner, Art

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